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Wydro et al.

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[54] **METHOD AND APPARATUS FOR CONTROLLING THE DENSITY OF DISPENSED HOT MELT THERMOPLASTIC ADHESIVE FOAM**

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[58] **Field of Search** ..... 68/183; 222/3, 4, 55, 222/57, 146 HE, 190, 195, 399, 638, 644; 261/28; 366/4, 5, 10

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[57] **ABSTRACT**

A method and apparatus are disclosed for controlling the density of dispensed hot melt thermoplastic adhesive foam in order to assure uniform foam characteristics. In order to create the hot melt adhesive foam, air or any relatively inert gas is mixed with the thermoplastic adhesive while the adhesive is in the molten state, and the mixture is then pressurized so as to force the gas into solution with the molten adhesive. As the molten adhesive/gas solution is dispensed at atmospheric pressure, the gas is released from solution and becomes entrapped in the adhesive so as to form a homogenous closed cellular adhesive foam. According to the practice of this invention, the supply of gas is periodically discontinued so as to prevent an excess volume of gas from being admixed with the molten adhesive whenever foamed adhesive is not being dispensed, thereby stabilizing the density of the adhesive foam.

19 Claims, 7 Drawing Figures